WEEKLY EPIDEMIOLOGY BULLETIN

NATIONAL EPIDEMIOLOGY UNIT, MINISTRY OF HEALTH & WELLNESS, JAMAICA

Weekly Spotlight

Food Safety

Foodborne illnesses are usually infectious or toxic in nature and caused by bacteria, viruses, parasites or chemical substances entering the body through contaminated food. Chemical contamination can lead to acute poisoning or long-term diseases, such as cancer. Many foodborne diseases may lead to long-lasting disability and death.

Bacteria

Salmonella , *Campylobacter* and enterohaemorrhagic *Escherichia coli* are some of the most common foodborne pathogens that affect millions of people annually, sometimes with severe and fatal outcomes. Symptoms can be fever, headache, nausea, vomiting, abdominal pain and diarrhoea. Foods involved in outbreaks of salmonellosis include eggs, poultry and other products of animal origin. Foodborne cases with *Campylobacter* are mainly caused by raw milk, raw or undercooked poultry and drinking water. Enterohaemorrhagic *Escherichia coli* is associated with unpasteurized milk, undercooked meat and contaminated fresh fruits and vegetables.

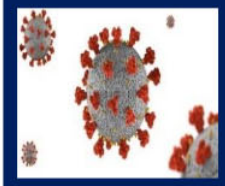
Listeria infections can lead to miscarriage in pregnant women or death of newborn babies. Although disease occurrence is relatively low, *Listeria*'s severe and sometimes fatal health consequences, particularly among infants, children and the elderly, count them among the most serious foodborne infections. *Listeria* is found in unpasteurised dairy products and various ready-to-eat foods and can grow at refrigeration temperatures.

Vibrio cholerae can infect people through contaminated water or food. Symptoms may include abdominal pain, vomiting and profuse watery diarrhoea, which quickly lead to severe dehydration and possibly death. Rice, vegetables, millet gruel and various types of seafood have been implicated in cholera outbreaks.

Antimicrobials, such as antibiotics, are essential to treat infections caused by bacteria, including foodborne pathogens. However, their overuse and misuse in veterinary and human medicine has been linked to the emergence and spread of resistant bacteria, rendering the treatment of infectious diseases ineffective in animals and humans.

https://www.who.int/news-room/fact-sheets/detail/food-safety

EPI WEEK 47



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SENTINEL SYNDROMIC SURVEILLANCE

Sentinel Surveillance in Jamaica

A syndromic surveillance system is good for early detection of and response to public health events.

Sentinel surveillance occurs when selected health facilities (sentinel sites) form a network that reports on certain health conditions on a regular basis, for example, weekly. Reporting is mandatory whether or not there are cases to report.

Jamaica's sentinel surveillance system concentrates on visits to sentinel sites for health events and syndromes of national importance which are reported weekly (see pages 2 -4). There are seventy-eight (78) reporting sentinel sites (hospitals and health centres) across Jamaica.

Table showcasing the Timeliness of Weekly Sentinel Surveillance Parish Reports for the Four Most Recent Epidemiological Weeks – 44 to 47 of 2023

Parish health departments submit reports weekly by 3 p.m. on Tuesdays. Reports submitted after 3 p.m. are considered late.

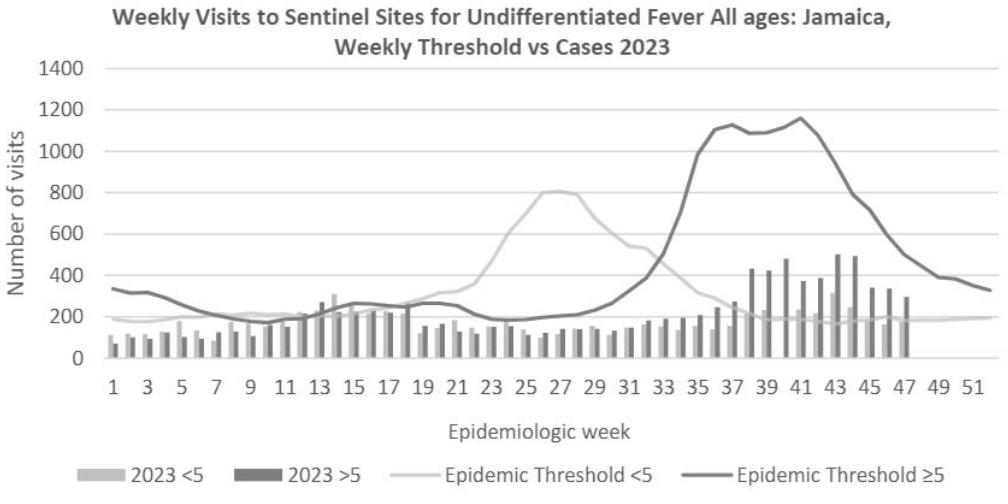
KEY:
Yellow- late submission on Tuesday
Red – late submission after Tuesday

Epi week	Kingston and Saint Andrew	Saint Thomas	Saint Catherine	Portland	Saint Mary	Saint Ann	Trelawny	Saint James	Hanover	Westmoreland	Saint Elizabeth	Manchester	Clarendon
2023													
44	On Time	On Time	On Time	On Time	On Time	Late (T)	On Time	On Time	On Time	On Time	On Time	On Time	On Time
45	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time
46	On Time	On Time	On Time	On Time	On Time	Late (T)	On Time	On Time	On Time	On Time	On Time	On Time	On Time
47	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time	On Time

REPORTS FOR SYNDROMIC SURVEILLANCE

UNDIFFERENTIATED FEVER

Temperature of >38⁰C /100.4⁰F (or recent history of fever) with or without an obvious diagnosis or focus of infection.



2 NOTIFICATIONS- All clinical sites

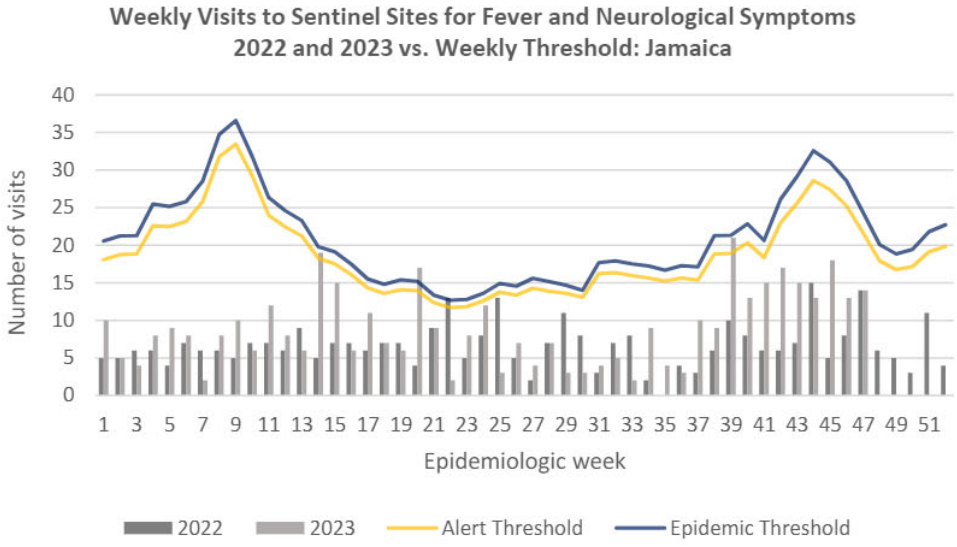
INVESTIGATION REPORTS- Detailed Follow up for all Class One Events

HOSPITAL ACTIVE SURVEILLANCE- 30 sites. Actively pursued

SENTINEL REPORT- 78 sites. Automatic reporting

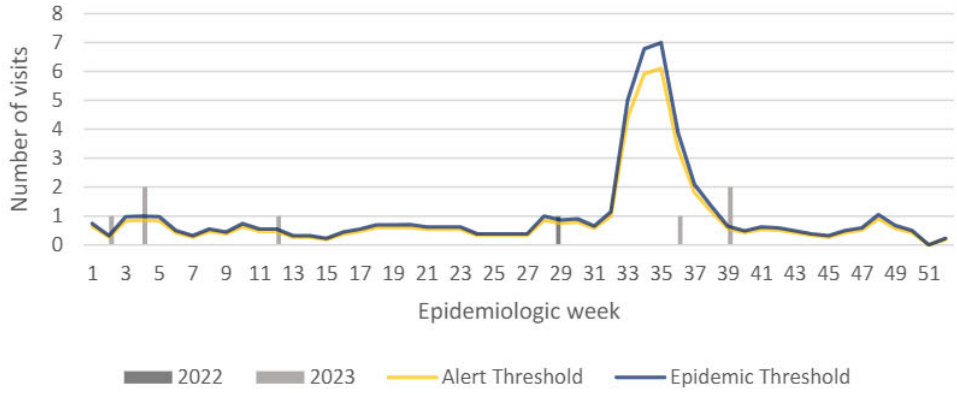
FEVER AND NEUROLOGICAL

Temperature of >38^{0}C /100.4^{0}F (or recent history of fever) in a previously healthy person with or without headache and vomiting. The person must also have meningeal irritation, convulsions, altered consciousness, altered sensory manifestations or paralysis (except AFP).



FEVER AND HAEMORRHAGIC

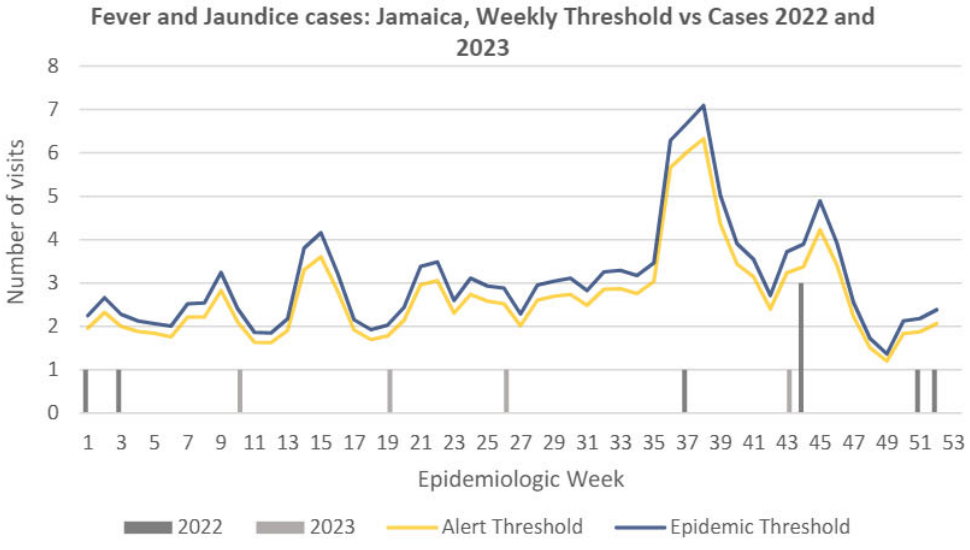
Temperature of >38^0C /100.4^0F (or recent history of fever) in a previously healthy person presenting with at least one haemorrhagic (bleeding) manifestation with or without jaundice.



FEVER AND JAUNDICE

Temperature of >38^0C /100.4^0F (or recent history of fever) in a previously healthy person presenting with jaundice.

The epidemic threshold is used to confirm the emergence of an epidemic in order to implement control measures. It is calculated using the mean reported cases per week plus 2 standard deviations.



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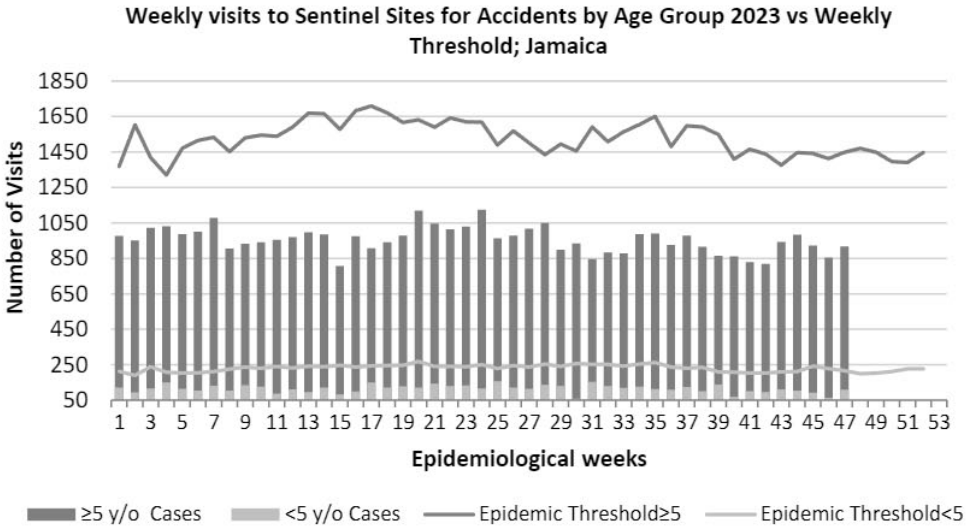
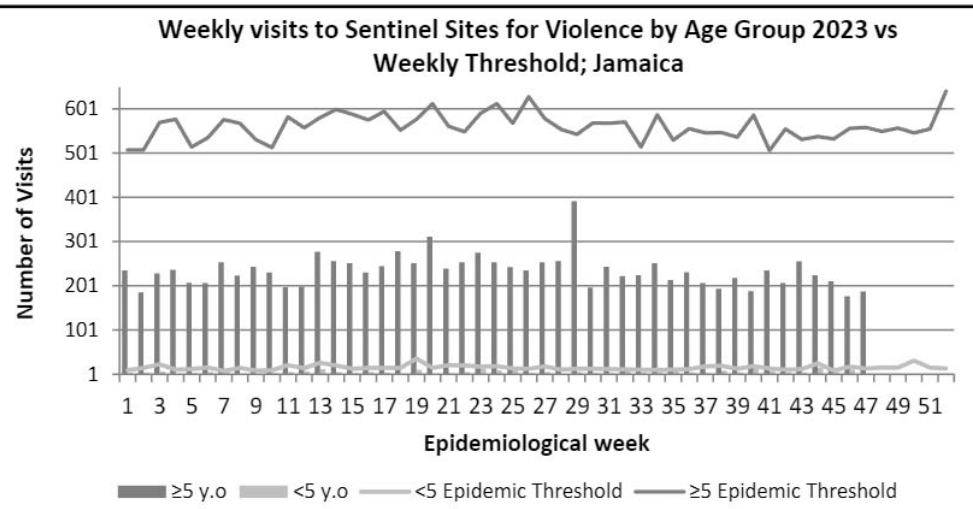
ACCIDENTS

Any injury for which the cause is unintentional, e.g. motor vehicle, falls, burns, etc.



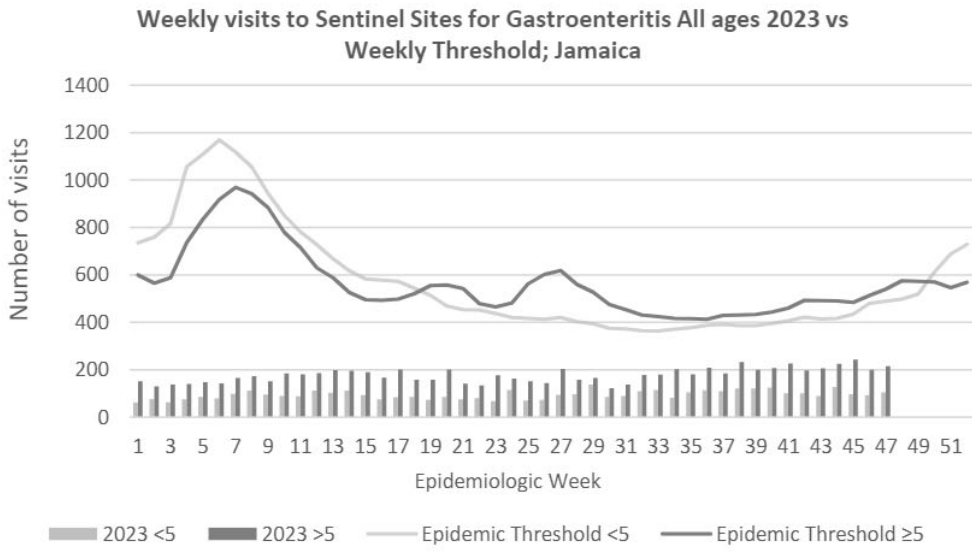
VIOLENCE

Any injury for which the cause is intentional, e.g. gunshot wounds, stab wounds, etc.



GASTROENTERITIS

Inflammation of the stomach and intestines, typically resulting from bacterial toxins or viral infection and causing vomiting and diarrhoea.



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CLASS ONE NOTIFIABLE EVENTS

	CLASS 1 EVENTS		Confirmed YTD[α] CURRENT YEAR 2023	Confirmed YTD[α] PREVIOUS YEAR 2022
NATIONAL /INTERNATIONAL INTEREST	Accidental Poisoning		271[β]	186[β]
	Cholera		0	0
	Dengue Hemorrhagic Fever[γ]		See Dengue page below	See Dengue page below
	COVID-19 (SARS-CoV-2)		3798	55476
	Hansen's Disease (Leprosy)		0	1
	Hepatitis B		53	31
	Hepatitis C		24	2
	HIV/AIDS		N/A	N/A
	Malaria (Imported)		3	2
	Meningitis		27	18
	Monkeypox		3	18
EXOTIC/ UNUSUAL	Plague		0	0
H IGH MORBIDITY/ MORTALITY	Meningococcal Meningitis		0	0
	Neonatal Tetanus		0	0
	Typhoid Fever		0	0
	Meningitis H/Flu		0	0
SPECIAL PROGRAMMES	AFP/Polio		0	0
	Congenital Rubella Syndrome		0	0
	Congenital Syphilis		0	0
	Fever and Rash	Measles	0	0
		Rubella	0	0
	Maternal Deaths[δ]		50	62
	Ophthalmia Neonatorum		119	125
	Pertussis-like syndrome		0	0
	Rheumatic Fever		0	0
	Tetanus		0	2
	Tuberculosis		43	33
	Yellow Fever		0	0
	Chikungunya[ε]		0	0
	Zika Virus[θ]		0	0

Comments

AFP Field Guides from WHO indicate that for an effective surveillance system, detection rates for AFP should be 1/100,000 population under 15 years old (6 to 7) cases annually.

Pertussis-like syndrome and Tetanus are clinically confirmed classifications.

[γ] Dengue Hemorrhagic Fever data include Dengue related deaths;

[δ] Figures include all deaths associated with pregnancy reported for the period.

[ε] CHIKV IgM positive cases

[θ] Zika PCR positive cases

[β] Updates made to prior weeks.

[α] Figures are cumulative totals for all epidemiological weeks year to date.

NA- Not Available

5 NOTIFICATIONS- All clinical sites

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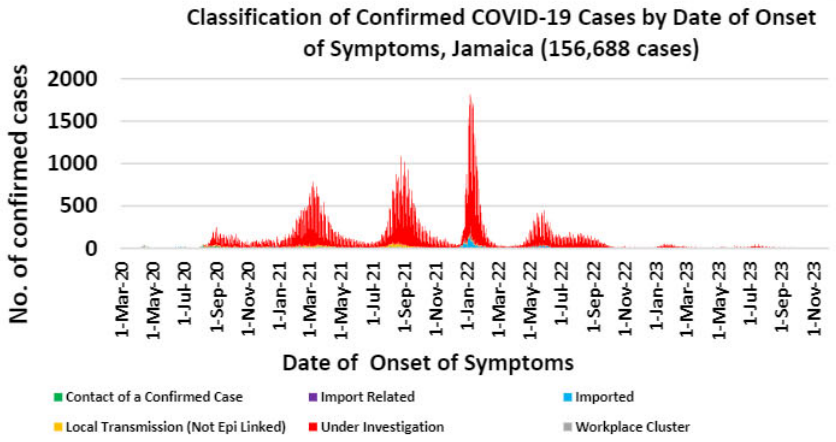
COVID-19 Surveillance Update

March 10, 2020 – EW 47, 2023

CASES	EW 47	Total
Confirmed	6	156688
Females	2	90305
Males	4	66380
Age Range	4 years to 80 years	1 day to 108 years

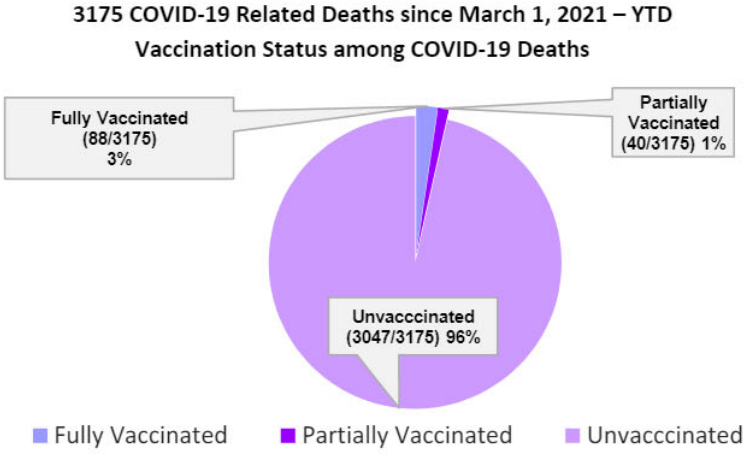
* 3 positive cases had no gender specification
* PCR or Antigen tests are used to confirm cases



COVID-19 Outcomes

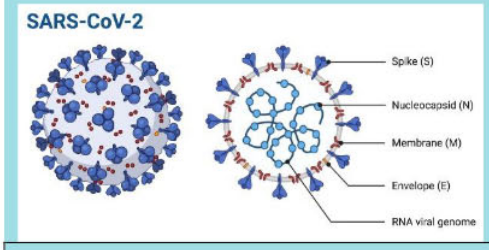
Outcomes	EW 47	Total
ACTIVE *2 weeks*		14
DIED – COVID Related	0	3737
Died - NON COVID	0	349
Died - Under Investigation	0	258
Recovered and discharged	4	103226
Repatriated	0	93
Total		156688

*Vaccination programme March 2021 – YTD
* Total as at current Epi week



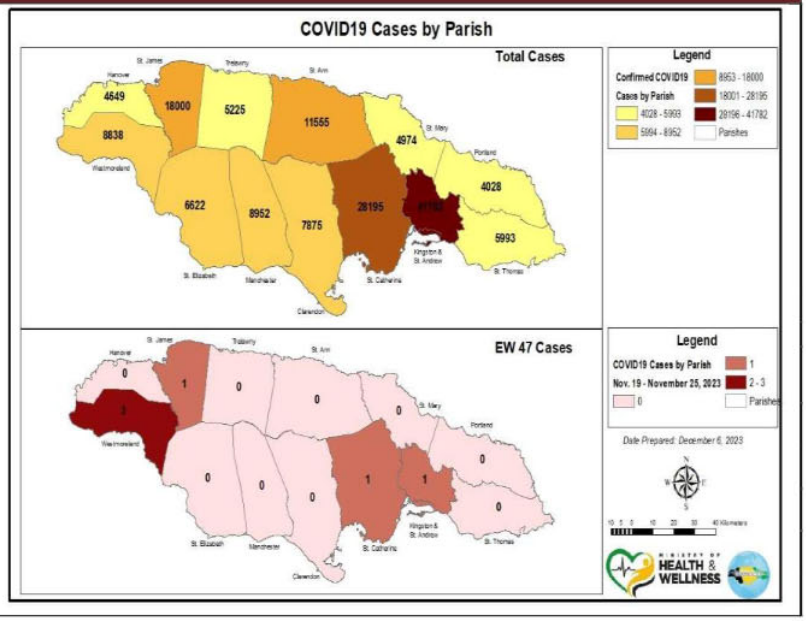
COVID-19 Parish Distribution and Global Statistics

COVID-19 Virus Structure



COVID-19 WHO Global Statistics EW44-EW47

Epi Week	Confirmed Cases	Deaths
44	135,918	679
45	153,145	817
46	113,909	320
47	43,184	104
Total (4weeks)	**446,156**	**1920**



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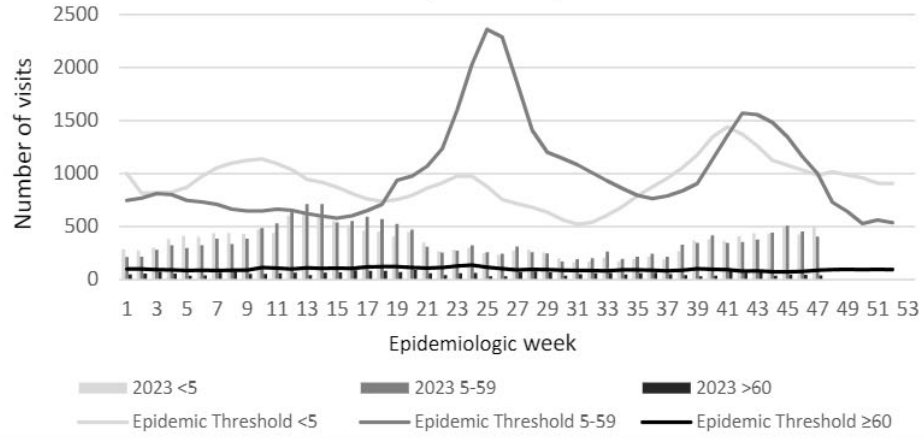
NATIONAL SURVEILLANCE UNIT INFLUENZA REPORT

EW 47

November 19 – November 25, 2023 Epidemiological Week 47

	EW 47	*YTD*
SARI cases	15	524
Total Influenza positive Samples	**2**	**196**
Influenza A	**0**	**32**
H3N2	0	1
H1N1pdm09	0	30
Not subtyped	0	1
Influenza B	**0**	**164**
B lineage not determined	0	2
B Victoria	0	162
Parainfluenza	0	1
Adenovirus	0	2
RSV	0	20

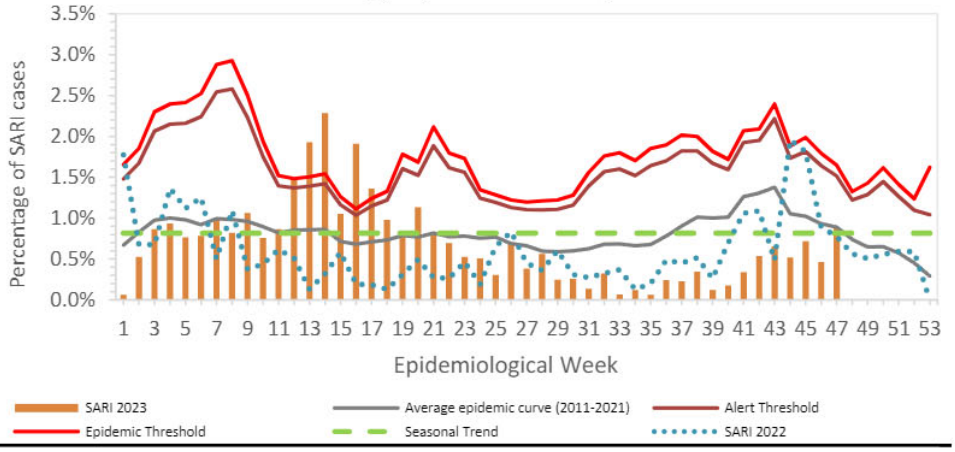
Weekly visits to Sentinel Sites for Influenza-like Illness (ILI) All ages 2023 vs Weekly Threshold; Jamaica



Epi Week Summary

During EW 47, fifteen (15) SARI admissions were reported.

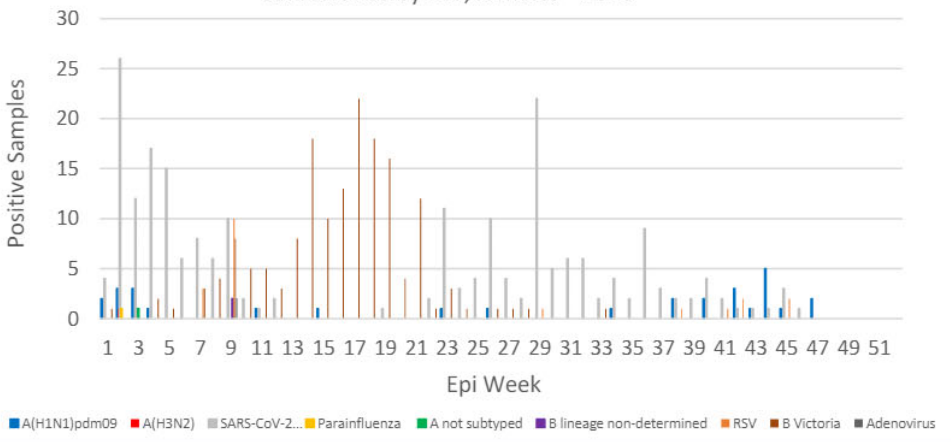
Jamaica: Percentage of Hospital Admissions for Severe Acute Respiratory Illness (SARI 2023) (compared with 2011-2021)



Caribbean Update EW 47

Caribbean: Influenza activity has fluctuated at moderate levels over the last four EWs. During this period, the predominant viruses have been influenza A(H1N1)pdm09, followed by influenza A(H3N2) and, to a lesser extent, influenza B/Victoria. RSV activity, after an increase in previous weeks, has experienced a decline in the last three EWs. SARS-CoV-2 activity continues to decrease, reaching low levels in the last EW. Cases of ILI and SARI have been declining in the last four EWs, with a higher proportion of SARI cases associated with influenza. The Dominican Republic continues to have elevated RSV activity, although decreasing in the last four EWs. In Jamaica, SARS-CoV-2 activity has slightly increased, accompanied by a pronounced rise in RSV activity in the last four EWs, with epidemic levels of pneumonia and acute respiratory infection.

Distribution of Influenza and Other Respiratory Viruses Under Surveillance by EW, Jamaica - 2023



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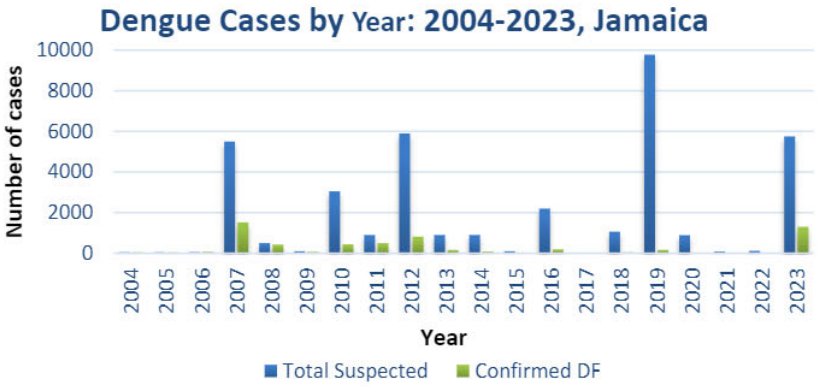
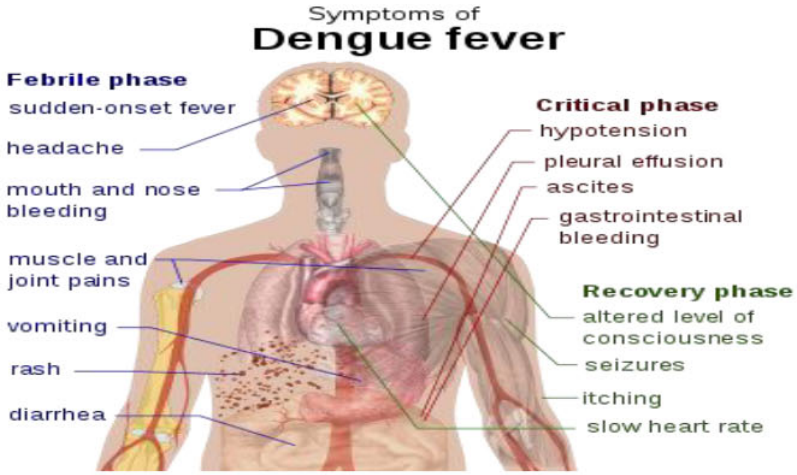
Dengue Bulletin

November 19– November 25, 2023 Epidemiological Week 47 | Epidemiological Week 47



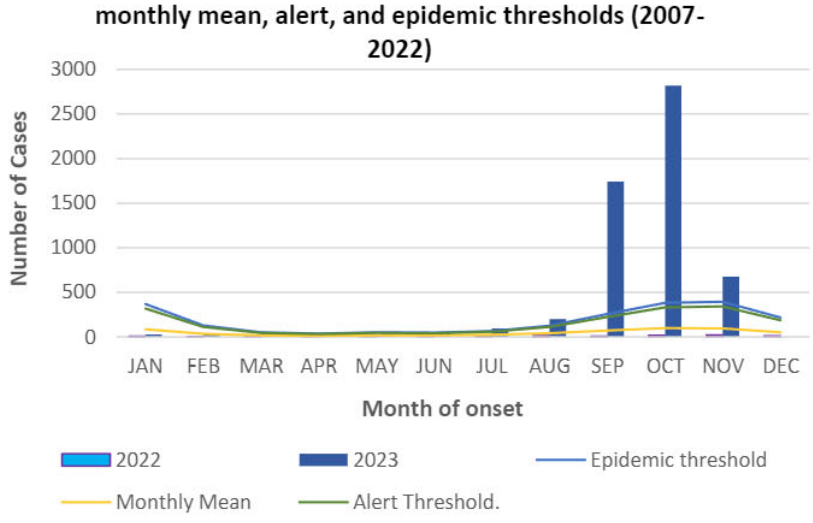
Reported suspected and confirmed dengue with symptom onset in week 47 of 2023

	2023*	
	EW 47	YTD
Total Suspected & Confirmed Dengue Cases	23	5754
Lab Confirmed Dengue cases	0	1301
CONFIRMED Dengue Related Deaths	0	5



Points to note:

- ***Figure as at December 4, 2023**
- **Only PCR positive dengue cases are reported as confirmed.**
- **IgM positive cases are classified as presumed dengue.**



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RESEARCH PAPER

Abstract

NHRC_22_O14

Financial Burden of In-patient Stroke care at Kingston Public Hospital in 2020

Morgan-Channer K[1], Amza A[2], Buckley -Smith D[3] , Wright K[4], Henry-McKoy D[5]
[1]Kingston Public Hospital ,North Street, Jamaica [2] Kingston Public Hospital ,North Street, Jamaica, [3-5] Kingston Public Hospital ,North Street, Jamaica

Objectives: To estimate the direct costs of stroke care per stroke patient admitted through the Accident and Emergency (A&E) Department at Kingston Public Hospital (KPH) for 2020.

Methods: We estimated the total direct cost of stroke from a health system perspective using an incidence-based, bottom-up costing approach. This approach required elucidating the service delivery process :KPH stroke care pathway and estimating relevant resource items and then costing them. Estimation of direct costs included stroke etiology diagnostic services and inpatient care costs: pharmacy and nursing care supplies. We created a Current Practice Model of the KPH Stroke care pathway based on the average stroke patient with Disability index of MRS score 4-5. Our analysis was based on the Current Practice Model of KPH Stroke care pathway and KPH Stroke registry data. We noted that there were limitations in KPH Current Practice Stroke Care Model due to a lack of onsite diagnostic services and the limited resource setting.

Results: The total number of stroke admissions in 2020 was 1090 persons. We estimated that cost per stroke patient to range from $97,103.40 to $276,373.79 JMD for an average length in-hospital stay of four days. We estimated that total direct stroke care costs at KPH for 2020 to be $117,674,551.74 JMD {approximately $764,120.46 USD} with the calculation inclusive 7% of all acute ischemic stroke patients being IV thrombolysis eligible.

Conclusion: Our data suggests that the total cost of direct stroke care at KPH is over 117 million JMD for 2020, a significant financial toll. Our study does not include stroke outpatient costs nor the financial loss from disability affecting the stroke survivor or their family which are significant additional variables to investigate in further research. Nation based programs to promote healthy lifestyle practices can reduce prevalence of modifiable stroke risk factors which may reduce the financial burden of stroke.

The Ministry of Health and Wellness
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Email: surveillance@moh.gov.jm

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